

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

The specification has been amended as follows:

On page 2, between lines 6 and 7, insert the following:

1. Field of the Invention

On page 2, between lines 11 and 12, insert the following:

2. Description of the Related Art

The paragraph beginning on page 5, line 13 has been amended as follows:

BRIEF DESCRIPTION OF THE [INVENTION] DRAWINGS

The paragraph beginning on page 8, line 2, has been amended as follows:

The bonding wire 4, on the other hand, may be formed of a wire of gold or aluminum having a diameter of 25 - 30 μm and is bonded to the electrode 8a or 8b by using an ordinary wire bonding apparatus. In the present invention, a first bonding process is conducted to the electrode pad 8a on the chip, followed by a second bonding process that is conducted to the electrode pad 8b, for reducing the overall height of the semiconductor device 5.

Paragraph beginning on page 13, line 19, has been amended as follows:

In the BGA device of the present embodiment, the bonding wires 14 are used to connect the corresponding electrode pads 18a and the electrode pads 18b at a central part of the chip 12, as indicated in FIG. 8. Further, the BGA semiconductor device of the present invention is laterally surrounded by the resin potting [1] 11.

In the Claims:

Claims 11 and 16 have been amended as follows:

11. (Amended) A semiconductor device, comprising:

a semiconductor chip having a top surface, said semiconductor chip carrying a first electrode;

a circuit substrate attached to a top surface of said semiconductor chip, said circuit substrate carrying thereon a predetermined conductor pattern including a second electrode and a third electrode;

a solder resist layer provided on said circuit substrate;

a resin layer intervening between said top surface of said semiconductor chip and said circuit substrate;

a spherical electrode [provided] formed in an opening in said solder resist layer on said

circuit substrate in correspondence to said third electrode;

a bonding wire electrically interconnecting said second electrode of said predetermined conductor pattern on said circuit substrate and said first electrode on said semiconductor chip; and

a resin potting encapsulating said bonding wire including said first and second electrodes, said chip and said resin potting being defined by a common edge surface substantially perpendicular to a principal surface of said substrate.

16. (Amended) A semiconductor device, comprising:

a semiconductor chip having a top surface, said semiconductor chip carrying a first electrode;

a circuit substrate [attached to] provided on a top surface of said semiconductor chip with a separation therefrom, said circuit substrate carrying thereon a predetermined conductor pattern including a second electrode and a third electrode;

a spherical electrode provided on said circuit substrate in correspondence to said third electrode;

a bonding wire electrically interconnecting said second electrode of said predetermined conductor pattern on said circuit substrate and said first electrode on said semiconductor chip;

a resin potting encapsulating said bonding wire including said first and second electrodes, said resin potting filling a space between said semiconductor chip and said circuit substrate; and

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a resin side wall cover covering a side wall of said circuit substrate[;] ,

said chip having a side wall substantially flush to an outer surface of said resin side wall cover, said side wall of said chip being substantially perpendicular to a principal surface of said chip.